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## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

## LISTING OF CLAIMS

1. (Currently Amended) A combinatorial screening apparatus comprising:
  - a) a cell body containing a fluid inlet;
  - b) a fluid permeable, conductive, catalyst array support positioned adjacent to the cell body, said catalyst array support having multiple locations for supporting solids and having a first side and a second side;
  - c) an independent catalyst mask positioned adjacent to the first side of the catalyst array support, said catalyst mask ~~having material removed to form~~ defining holes where the holes are arranged in alignment with the multiple locations for supporting solids of the catalyst array support and thereby defining an unobstructed area above each location for supporting solids and masking the remainder of the catalyst array support; ~~and~~
  - d) a cell cover positioned adjacent to the catalyst array support, said cell cover ~~having material removed to allow~~ defining an opening for monitoring of the solids; ~~and;~~
  - e) an excitation source in alignment with the cell cover wherein the excitation source is an ultraviolet radiation source.
2. (Original) The apparatus of Claim 1 further comprising a detector in alignment with the cell cover.
3. (Currently Amended) The apparatus of Claim 1 further comprising a gas diffuser positioned between the catalyst array support and fluid inlet of the cell body.
4. (Cancelled).
5. (Cancelled).
6. (Original) The apparatus of Claim 1 further comprising at least one fastener.
7. (Original) The apparatus of Claim 1 further comprising a seal between each of the elements a-d of Claim 1.

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8. (Previously Presented) The apparatus of Claim 1 further comprising an independent reagent mask positioned between the cell body and the catalyst array support, adjacent to the second side of the catalyst array support, said reagent mask having material removed to form holes where the holes are in alignment with the multiple locations for supporting solids of the catalyst array support and thereby defining a unobstructed area below each location for supporting solids and masking the remainder of the catalyst array support.
9. (Original) The apparatus of Claim 1 further comprising a diffuser located between the cell body and the catalyst array support.
10. (Original) The apparatus of Claim 1 wherein the catalyst array support is carbon paper.
11. (Original) The apparatus of Claim 1 wherein the catalyst mask is Plexiglas.
12. (Original) The apparatus of Claim 1 wherein the cell body is further characterized in having a fluid outlet.
- 13.-32. Canceled
33. (Previously Presented) The apparatus of Claim 8 further comprising a diffuser located between the cell body and the reagent mask.
34. (Previously Presented) The apparatus of Claim 8 further comprising a seal between the cell body and the reagent mask; a seal between the reagent mask and the catalyst arrays support; a seal between the catalyst array support and the catalyst mask; and a seal between the catalyst mask and the cell cover.
35. (New) A combinatorial screening apparatus comprising:
  - a) a cell body containing a fluid inlet;
  - b) a fluid permeable, conductive, catalyst array support positioned adjacent to the cell body, said catalyst array support having multiple locations for supporting solids and having a first side and a second side;
  - c) an independent Plexiglas catalyst mask positioned adjacent to the first side of the catalyst array support, said catalyst mask defining holes arranged in alignment with the multiple locations for supporting solids of the catalyst array support and thereby defining an unobstructed area above each

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- location for supporting solids and masking the remainder of the catalyst array support; and
- d) a cell cover positioned adjacent to the catalyst array support, said cell cover defining an opening for monitoring of the solids.
36. (New) The apparatus of Claim 35 further comprising a detector in alignment with the cell cover.
37. (New) The apparatus of Claim 35 further comprising a gas diffuser positioned between the catalyst array support and fluid inlet of the cell body.
38. (New) The apparatus of Claim 35 further comprising an excitation source in alignment with the cell cover.
39. (New) The apparatus of Claim 38 wherein the excitation source is an ultraviolet radiation source.
40. (New) The apparatus of Claim 35 further comprising at least one fastener.
41. (New) The apparatus of Claim 35 further comprising a seal between each of the elements a-d of Claim 35.
42. (New) The apparatus of Claim 35 further comprising an independent reagent mask positioned between the cell body and the catalyst array support, adjacent to the second side of the catalyst array support, said reagent mask having material removed to form holes where the holes are in alignment with the multiple locations for supporting solids of the catalyst array support and thereby defining a unobstructed area below each location for supporting solids and masking the remainder of the catalyst array support.
43. (New) The apparatus of Claim 35 further comprising a diffuser located between the cell body and the catalyst array support.
44. (New) The apparatus of Claim 35 wherein the catalyst array support is carbon paper.
45. (New) The apparatus of Claim 35 wherein the cell body is further characterized in having a fluid outlet.
46. (New) The apparatus of Claim 42 further comprising a diffuser located between the cell body and the reagent mask.

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47. (New) The apparatus of Claim 42 further comprising a seal between the cell body and the reagent mask; a seal between the reagent mask and the catalyst arrays support; a seal between the catalyst array support and the catalyst mask; and a seal between the catalyst mask and the cell cover.
48. (New) The apparatus of Claim 35 further comprising a catalyst support backing located adjacent to the second side of the catalyst array.